Iran J Basic Med Sci. 2016 Jul;19(7):800-3.

Effect of mobile phone radiation on pentylenetetrazole-induced seizure threshold in mice.

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Abstract

OBJECTIVES:

Scientific interest in potential mobile phone impact on human brain and performance has significantly increased in recent years. The present study was designed to evaluate the effects of mobile phone radiation on seizure threshold in mice.

MATERIALS AND METHODS:

BALB/c male mice were randomly divided into three groups: control, acute, and chronic mobile phone radiation for 30, 60, and 90 min with frequency 900 to 950 MHz and pulse of 217 Hz. The chronic group received 30 days of radiation, while the acute group received only once. The intravenous infusion of pentylenetetrazole (5 mg/ml) was used to induce seizure signs.

RESULTS:

Although acute mobile radiation did not change seizure threshold, chronic radiation decreased the clonic and tonic seizure thresholds significantly.

CONCLUSION:

Our data suggests that the continued and prolonged contact with the mobile phone radiation might increase the risk of seizure attacks and should be limited.